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ABSTRACT

The paper presents a rapid scanning of the state of the art of research and evaluation of Outward Bound and related educational programs. Initial comments outline criteria for assessing internal and external validity of studies. Distinctions are made between research, evaluation, measurement, judgement, and public relations. The work of Rosen, Hutchinson, Scriven, and Stake is recommended as important background reading for those interested in the evaluation of Experiential Education programs. Summary of existing work is presented in five categories: (1) studies of Outward Bound programs, (2) studies of related educational programs, (3) studies of programs for urban youth and delinquents, (4) non-empirical studies, and (5) recent work. The 29 works deal with strengthening self-image, social functioning, changing self-concept, changes in personality and values, tolerance of others, the roles of counselors, changes in the home environment, self-awareness, dropouts, organizational change, parent relationships, college ambition, race relations, value of education, recidivism rate, consequences of aggression, the American Indian world view and Outward Bound, affective goals, and student's stability. (Author/NQ)

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A REVIEW OF RESEARCH AND EVALUATION LITERATURE ON OUTWARD BOUND AND RELATED EDUCATIONAL PROGRAMS.

An Informal Paper Presented at

THE CONFERENCE ON EXPERIENTIAL EDUCATION

Sponsored by
The Colorado Outward Bound School
and
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of the
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U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
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Estes Park
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The ultimate, most holy form of theory is action.

..... Nikos Kazantzakis.

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Review of Research and Evaluation Literature On Outward Bound and Related Educational Programs.

ABSTRACT: This paper presents a rapid scanning of the state of the art of research and evaluation of Outward Bound and related educational programs. Initial comments outline criteria for assessing internal and external validity of studies. Distinctions are made between research, evaluation, measurement, judgement, and public relations. The work of Rosen, Hutchinson, Scriven, and Stake is recommended as important background reading for those interested in the evaluation of Experiential Education programs. Summary of existing work is presented in five categories: (1) Studies of Outward Bound programs, (2) Studies of related educational programs, (3) Studies of programs for urban youth and delinquents, (4) Non-empirical studies, (5) Recent work.

INTRODUCTION: Sometimes it seems that admitting an interest in research and evaluation is akin to an acknowledgement of leprosy in some Outward Bound circles. However, it seems that if Outward Bound methods are to become accepted as part of formal education then a responsibility exists to demonstrate (prove?) to others that programs are meeting their stated goals. A secondary interest is that of upgrading the quality and consistency of programs for "in-house" improvement.

Studies of Outward Bound, or related educational programs, can be divided into two main categories: (1) Experimental (empirical), and (2) Non-experimental studies. The intention of experimental studies is to demonstrate the existence (or non-existence) of a causal relationship between the Outward Bound program and observed changes in participants, such as "enhanced self-concept."

Internal validity. Problems associated with demonstrating a causal relationship between program and changes in participants can be examined by use of a set of criteria entitled "threats to internal validity." These help

us decide if the changes we observe in people are caused by the experience or by some other factor. Common threats to internal validity are:

Threats to internal validity.

1. Maturation. Perhaps the changes we observe are simply due to the fact that the individuals concerned have grown older. (Usually guarded against by the use of a control group.)

2. Testing. Perhaps the form of testing we are using is such that changes in responses at the end of the experience are really the result of the student "second guessing" the test based on having taken it once already prior to the experience.

3. Selection of Individuals. If a control group is used to guard against maturation effects, it is important that the control group and the group participating in the program be similair. (Usually achieved by random assignment of individuals to groups.)

The point here is not to give a detailed treatise on experimental research design, but to indicate some of the factors involved if one is going to make a serious attempt at demonstrating a causal relationship between program and changes in people that will satisfy knowledgable educational sceptics. The three above mentioned threats to internal validity are from a list of seven criteria frequently used for evaluating the quality of educational research.(1)

Generalising to other groups.

A second important consideration in experimental research design is, "O.K., it seems that the experience has caused some changes in this particular group. But, to what extent can we generalise from this group to others?" In the above example of enhanced self-concept we need to know how likely it is that other groups, at other points in time, will manifest similair self-concept changes as a result of similair experiences. The degree to which the results of the study can be

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(1) The examples of sources of internal experimental invalidity used here are based on D.T.Campbell and J.C.Stanley's "Experimental and Quasi-Experimental Designs for Research," Rand McNally & Co. 1972.

External validity.

generalised is called the external validity of the study. There are a number of threats to external validity that need attention if we are interested in generalising our results:

1. Group studied. Perhaps the group studied is not representitive of a wider population of people.
2. Interaction of Personal Characteristics with the Experience. Perhaps the experience will cause changes in a group of white middle-class students, but not do much for inner-city students of ethnic minority backgrounds.
3. Hawthorne effect. Perhaps students behave differently if they know they are participating in a study. Other groups in the future not involved in a study might have different responses.
4. Novelty effects. Perhaps it is simply the fact that students are in a new situation that makes for changes, irrespective of program design.

These are only three of a listing a eleven possible threats to external validity used in evaluating educational research.(1)

Well, enough of this. The point here is simply that to carry out experimental research which both demonstrates a causal relationship between program and observed changes in people, and which can be generalised to other people and other situations, is complex and time consuming. Respectable research designs must pay attention to all known threats to internal and external validity if they are to carry much weight.

The complexity of experimental research necessitates a good deal of "tinkering" by the researcher, and it is difficult to obtain the desired degree of control in a program such as Outward Bound.

Consequently, many of the studies focussing on Outward Bound or related educational programs are not true experimental designs, and frequently fail

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(1) From, "The External Validity of Experiments," Bracht, Glenn H., and Glass, Gene V., Laboratory of Educational Research, University of Colorado.

to meet known criteria for internal and external validity. In a recent work which reviewed the substantial amount of research literature available on Outward Bound, Smith (1973) concluded that "to date .... no evaluation study has been conducted to demonstrate unequivocally the results of Outward Bound. (1) Smith qualifies this statement by adding, "that studies did not meet the criteria of unequivocal results is not an indictment of the studies reviewed, since many different roles may be played by evaluation studies. Rather they lay a premise for more controlled experimentation if the intent of Outward Bound is to demonstrate conclusively the effects of the program."

Have test, will travel!

For myself, as I look at the existing literature, it seems that a good deal of it falls into that class of research which one might disparagingly call, "Have test, will travel," or, "An instrument looking for a phenomenon to happen." Namely, that insufficient care has been taken in the design of the study in identifying variables of interest, and in developing an appropriate methodology.

Research and evaluation.

Smith mentions that although the studies which have been reviewed often fail to meet rigorous criteria the results can still be of interest and of use. Some distinctions might help here. Rosen states, "although they are inextricably linked in the minds of many educators, research and evaluation are generally not mutually enhancing endeavours, and ..... ought to be undertaken seperately."(2) Rosen makes distinctions between research, evaluation, measurement, judgement, and public relations:

1. Research. "Generating knowledge for the sake of knowledge."
2. Evaluation. "Improving educational enterprises by providing data for enlightened decision making."
3. Measurement. "Testing using valid and reliable instruments ..... Some evaluators insist that evaluation equals measurement. Where no instruments are yet available to measure important goals, and

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(1) Smith, Mary L., Gabriel, R., Andersen, Ronald D., Final Report: Project to Design an Evaluation of Outward Bound. Bureau of Educational Field Services, University of Colorado, 1973, p.1.

(2) Rosen, David. "New Evaluation for New Schools," in, Changing Schools, Educational Alternatives Project, Indiana University, School of Educ. Room 328, Bloomington, Indiana, 47401.

where available instruments do not measure what decision makers are most concerned about, this practice is absurd."

4. Judgement. (Outside expert model). "because judgement evaluation does not systematically collect decision makers goals .... data are likely to be irrelevent.

5. Public Relations. "For improving the program image .... Provide data on goals which are judged in advance as most likely to succeed.

Rosen includes in his article a description of the recently developed Fortune/Hutchinson Evaluation Methodology. (1) I recommend that anyone interested in the evaluation of Experiential Educations programs who is feeling a little bit overwhelmed by all this talk of internal and external validity, look at this material, together with Rosen's article. Two other important recent publications which will help give orientation before proceeding with a research or evaluation effort are:

1. The Methodology of Evaluation, by Michael Scriven. In, Educational Evaluation, Worthen and Sanders, Charles A. Jones Pub. Co. Ohio, 1973.
2. The Countenance of Educational Evaluation, by Robert Stake. In, "Teacher's College Record," Vol. 68, No.7, April 1967.

Scriven and Stake are two leading names in recent developments in evaluation which give hope to the possibility of developing meaningful approaches which are relevent and appropriate for Experiential Education programs. Whether you are interested in designing your own research or evaluation, obtaining the services of an "expert" to do it for you, or simply in getting a handle on the current jargon to help make sense or the reams of material available, a little time spent with the ideas of Rosen, Hutchinson, Scriven and Stake, will pay real dividends.

With these thoughts in mind I will launch into a rapid overview of existing research and evaluation on Outward Bound and related educational programs. I will make no attempt to evaluate these studies using criteria of internal and external validity, but will

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(1) Major parts of the methodology are available in mimeographed form from, Dr. Thomas Hutchinson, Center for Educational Research, School of Education, University of Massachusetts, Amherst, Mass. 01002.

simply remind you that the data from any study quoted here needs to be approached with caution. In some cases the changes reported might not be the results of the program, and results do not necessarily generalise to other groups and other situations. You will need to look at individual studies yourself and make up your own mind on their validity.

The available literature can be classified into five categories:

1. Studies of Outward Bound programs.
2. Studies of educational programs related to Outward Bound.
3. Studies on programs for Urban Youth and Delinquents.
4. Non-Empirical Studies.
5. Recent work.

STUDIES OF OUTWARD BOUND PROGRAMS:

Strengthening self-image.

An early study by Richards (1966) used a Semantic Differential Test with a group of 90 boys enrolled in Colorado Outward Bound School course C.11. Richards concluded that there had been a "substantial strengthening of the self-images of the great majority of the young men who went through the course." Using interview techniques with a smaller sample, Richards concluded that (1) "boys with stronger self-images and more outgoing personalities will enroll and participate in Outward Bound more than boys whose self-confidence is not so strong." (2)"The results of the program appear to be felt more in areas of social functioning than in academic pursuits."

Social functioning.

more stable

A study carried out in England, Strutt (1966) using the Sixteen Personality Factor Questionnaire, the Intelligence Progessive Matrices Test, Self-ratings, sponsor ratings, and confidential Outward Bound student reports, concluded that in comparison with a control group, girls who had completed an Outward Bound course were relatively more stable, more

dependable, critical.

dependable, more critical, livlier, less sensitive, and less conventional.

Change in self-concept.

Clifford and Clifford (1967) examined the effects of a Colorado Outward Bound School course on adolescent boys. They concluded that "overall change in the self-concept did take place in the appropriate direction and discrepencies between the self and the ideal-self were reduced."

Self-image.

An evaluation of the Outward Bound Teacher's Practicum, Hawkes et al. (1969) using a questionnaire and interviews some time after the program had ended concluded that "the Outward Bound Teacher's Practicum ..... is an experience which influenced or changed many teacher's self-image and view of their profession.

Control personal fate.

In a study carried out at the North Caroline Outward Bound School, Borstelmann (1969), one of the main conclusions was that, "associated with the program experience is a general increase among students in the belief that they can control their personal fates." Borstelmann also concludes that, "student value hierarchies .... show some tendancy to move towards staff positions about the importance of competent behaviours." And, in a cautionary note, he points out that Outward Bound, "does a better job with those students who arrive sharing convictions about self-determination and getting on with the job in a cooperative, task-centered manner."

Changes in personality and values.

Tolerance of others.

Shulze (1970), using a combination of questionnaire and personal interview, concluded that the Outward Bound course, "is an intense personal experience frequently involving changes in personality and values," and, "enables (participants) to look differently at themselves and the world. He also concluded that "one of the most significant results of the Outward Bound course "appears to be an appreciation and tolerance of others different from oneself."

Positive self-concept.

In a study of 78 Toledo high school students which used the goals of a high school guidance program as a frame of reference, Lovett (1971) concluded that students who participated in Outward Bound gained a more positive self-concept, became more confident in decision-making, and enjoyed better interaction with their peers. Lovett also concluded that high

Roles of counsellors.

school guidance counsellors working in a program that promotes the concepts of Outward Bound were more likely to fulfill their true counselling roles and to foster within students the concepts which the counselling profession desires to promote.

Self-confidence.
Needs of others.
Maturity.
Mix well.

Fletcher (1971) carried out a questionnaire study of 3,000 students who had taken Outward Bound courses in England. His main conclusions were that both students and their sponsors felt changes had occured in (1)increased self-confidence, (2) greater maturity, (3) greater awareness of the needs of others, and, (4) greater ability to mix well. Fletcher also concluded that the majority of sponsors and students felt that, "the influence of a single Outward Bound course is very persistent," with the majority of sponsors and students expressing the feeling that changes are permanent.

Permanence of changes.

Positive change in Self-concept.

Changes decrease in home environment.

A study by Whetmore (1972) looked at the effects of Outward Bound on the self-concepts of 219 boys who attended the Hurricane Island Outward Bound School. Wetmore used the Tennessee Self-Concept Scale, the Kelly and Baer Behaviour Rating Scale, and self-reports from students six months after the course. He concluded that there was "a distinct positive change in self-concept while in attendance at the Outward Bound School," that, "the intensity of positive change in self-concept decreased after they returned to their home environment," and that "self-concept changes were consistent with behaviour" as reflected by the instructor ratings on the Kelly and Baer Behaviour Rating Scale. Wetmore did not use a control group and his sample of 219 students included low numbers of students in certain background categories, i.e. race and socioeconomic status.

Self-awareness.
Self-confidence.

Davis (1972) looked specifically at the experience of fear during the rock climbing phase of an Outward Bound program. A mailed questionnaire to Outward Bound graduates surveyed reactions before, during, and after rock climbing. Plotting his data on graphs, Davis concluded that "the overcoming of fear results in new levels of self-awareness and self confidence." He added that "the transformation of fear into enthusiasm must be considered as a prime value in the increased self-awareness and self-actualization resulting from rock climbing."

In a recent study Koepke (1973) examined the effects of a Colorado Outward Bound School course on the anxiety levels and self-concepts of 33 male and 11 female participants. Koepke used the Gough Adjective Check list as a self-concept measure and the State-Trait Anxiety Inventory as an anxiety measure. She concluded that Outward Bound participants "view themselves more positively and possess lower anxiety levels at the end of a course."

More positive view.

STUDIES OF EDUCATIONAL PROGRAMS RELATED TO OUTWARD BOUND:

A study by Naches and Roberts (1967) examined the effect of Outward Bound adaptive programming on high school students of Adams County School District No. 14 in Colorado, involved in a program entitled, "Dare to Care." The authors of the study were professional psychologists on the school district staff. Using the High School Personality Questionnaire, a Student Attitude Survey, and a Staff Rating Scale, with three groups of students, "top students, volunteers, and potential drop-outs," they concluded that all students became more (1) outgoing, (2) affected by feelings, (3) assertive, (4) tender-minded, (5) self-controlled. They also concluded that these changes were most significant for the students categorized as "potential drop-outs."

Outgoing.
Assertive.
Self-controlled.
Drop-outs.

A study by Shulze (1971) entitled the Impact of Outward Bound on Twelve High Schools, used a combination of observations of schools, reading of existing reports, and questionnaires sent to all schools. His conclusions included that Outward Bound programming in the schools studied has served as a "catalyst" challenging commonly held notions regarding "scheduling, curriculum requirements, student-teacher relations, strictly cognitive curricula, and performance criteria." Schulze reports that Outward Bound has "legitimized and provided sanction for the progressive notion of learning by doing," and that programs in the schools he studied have provided "a vehicle for curriculum reform." In the area of human relationships Shulze reports that Outward Bound served to "bring opposing groups together and initiate dialogue and interaction." Little formal methodology was used in this study. Shulze relied mainly on his own interviews and observations.

Catalyst.

Fersch and Smith (1971) took a more formal look at an Outward Bound adaptive program (Project Adventure) at Hamilton Wenham Regional High School in Massachusetts. Using a battery of different tests (Rotter Scale of Internal and External Control, Tennessee Self-Concept Scale, Student Questionnaire, Self-Rating Scale, School Climate Survey, and physical tests) the authors' major findings were (1) that there

Positive change.

was "overall positive change for the sophmore class," (2) that students involved in the project showed a

Internal control.

higher degree of internal control, (3) that students

Regular school program.

exhibited a "significant decrease in general enthusiasm" for the regular school program, and, (4) in general,

Girls did as well as boys.

"girls did as well, in many instances better, than boys."

Looking at Outward Bound as a strategy for organizational change in a large public school district Godfrey (1972) concluded that (1) project participants experienced significant personal growth and improved inter-personal relationships, (2) the Outward Bound project stimulated

Organizational change.

organizational change in the district by involving a wide range of senior administrative personnel in addition to teachers and pupils, (3) the Outward Bound project "influenced teachers in their work with both colleagues and pupils," (4) "the initial positive response of

Enduring quality.

participants ..... exhibited an enduring quality." (Maintained six months after the experience as measured by a mailed questionnaire.)

An evaluation of an Alternate Semester program at Lincoln Sudbury Regional High School in Massachusetts was carried out by three staff members of the program, Copp, Pierson, and Sargent (1972). Their report includes student anecdotal responses, the results of a questionnaire sent to parents, staff evaluations of particular units, and overall staff evaluations of the project. Among their major findings is the statement, " if there is one consistent theme that runs throughout the evaluations it is that the majority

Positive, self-confident.

of these students acquired a more positive, self - confident image of themselves. The authors also make the summary conclusion that "there is no question that these students were deeply affected and most left

Courage to face self and world.

this program with more courage to face themselves and the world."

Ratliff (1972) carried out an evaluation of the Senior Seminar program at Denver East High School in Colorado. A questionnaire was completed by 93 students involved in the seminar and by a control

group consisting of 31 seniors randomly selected from the student body of the school. Summary of much of the data is not included in the report. An item-by-item listing of student responses to the 59 questions included in the questionnaire is given. In comparison with the control group Ratliff reports that seminar students (1) developed more meaningful relationships with teachers, (2) felt that the Seminar experience had had a significant effect on their goals for the future, (3) viewed the Seminar as an experience leading to personal change, (4) related better to their parents, (5) related better to members of other racial groups, (6) developed closer personal relationships with other students, (7) increased in their desire to go to college. A questionnaire given to parents recieved positive responses to the cost of the seminar and to the difference it had made in their children's lives.

Future goals.
Personal change.
Parent relationships.
College ambition.

Following on from Ratliff's 1972 study, the Denver Public Schools carried out their own evaluation of the East High School Senior Seminar, Elledge (1973). The Seminar was criticized for a lack of precise goals, but in the conclusion of the study the evaluators identified improved self-understanding, improved relations with students from other racial groups, improved understanding of society, and improved sense of the value of education, as the major outcomes of the Seminar.

Self-understanding.
Race-relations.
Value of education.

A semester-long prgram at a Colorado Springs high school, modelled on the program at Denver East High School, called the Mitchell High School Senior Seminar, was evaluated by one of its staff members, Fornander (1974). Using a variety of evaluation methods including student reactions, staff evaluations, evaluation by observors, and a statistical pre-post test employing a randomly selected control group. A flaw in the statistical design (namely that students did not write their names on the test instruments) prevented formal statistical analysis of the data. Three instruments were used; the Tennessee Self-Concept Scale, the School Climate Survey, and the Student Description Form. Responses on ten of the twelve scales of the Tennessee Self-Concept Scale showed "desirable changes (indicating positive growth in self-concept) for the Seminar students. In most cases the mean differences (group data) for the Seminar students was noticeably greater than for the control group." The results of the School Climate survey

Positive growth in self-concept.

Less positive about regular school.

indicate that Seminar students felt less positive about the regular school program than the control group, both before and after the Seminar. A significant change for Seminar students was an increased feeling of teacher warmth towards them. The control group did not change in its perception of teacher warmth. There was little difference between Seminar students and control group on the Student Description Form, with the exception that the Seminar students showed an increase on the dimension, "Consideration of Others."

Teacher warmth.

Consideration of others.

A semester-long program, the Wasson Experiential Education Seminar, at another Colorado Springs High School was evaluated by two teachers at the school, Morris and Hart (1974). Their report incorporates two complementary approaches, (1) a detailed statement of goals generated in part from overall educational goals of the school district, leading to reactions from students, staff, and parents, and, (2) a pre-post testing of Seminar students using the W.E.E.S. Affective Inventory, (Modified from "Inventory of Outward Bound Effects," Smith et al., Bureau of Educational Field Services, University of Colorado, 1973.) The data from the Affective inventory indicate: (1) "a more positive self-concept has apparently developed during the period of the Seminar, (2) on the dimension measuring self-awareness the report states that "many students are more cognizant of their strengths and weaknesses," (3) on the dimension measuring self-assertion the authors state that "students now feel they are more responsible for their own actions." (4) little change is reported on the dimension measuring acceptance of others, but the evaluators state that "one area of significant progress during the Seminar has been the tendancy of most students to accept others for what they are."

Positive self-concept.

Strengths and weaknesses.

Responsible for own actions.

Accept others as they are.

STUDIES OF URBAN YOUTH AND DELINQUENTS:

Work in this area was begun by Schroeder and Lee (1967) with a study of 40 inner-city, low-achieving, high school students. After Outward Bound the group was found to perceive themselves individually as more active, stronger, more positive, and less alienated. With regard to others the group demonstrated a greater

Active, less alienated.

Individuals. Goal-orientation. Goal-achievement.

capacity to see other people as individuals, and a greater capacity to view peers and teachers as more positive and helpful. The group also showed a more mature goal-orientation and greater flexibility of means of goal-achievement.

Recidivism rate.

Kelly and Baer (1968) carried out a two-year study of 60 adjudicated delinquents from the Massachusetts Youth Service who participated in Outward Bound. Of 42 boys who completed the program, the recidivism rate was 20% compared to figures of 40% for the State of Massachusetts and 50% - 60% for the Nation. The work carried out in this study received considerable attention and was published in two professional journals, Kelly and Baer (1969) and Kelly and Baer (1971).

Consequences of aggression.

Freeman, Spilka, and Mason (1969), carried out an empirical evaluation of adjudicated delinquents who participated in a cooperative program with the Colorado Outward Bound School. The evaluators main hypothesis, that "the consequences of aggression would come to be negatively viewed," was accepted.

NON-EMPIRICAL STUDIES OF OUTWARD BOUND:

American Indian world view and Outward Bound.

Lev (1968) makes a comparison between the American Indian world view and the Outward Bound concept. He points out that "the American Indian has had a view of reality, or world view, which was ..... rooted in a response to the coercion of nature." He follows this by stating that, "the philosophy behind programs such as Outward Bound is oriented toward ..... a confrontation with nature." Lev suggests that "perhaps a working relationship can be established between the red man and the white man with this goal and path in mind."

In a comparitive study which examined the Hurricane Island (U.S.A.), Moray (Gt. Britain), and Eskdale (Gt. Britain) Outward Bound Schools, Tresemer (1969), by means of interviews and participant observor techniques, looked at the Outward Bound program from the points of view of "character training," "value-forming experience," and, " education for personal growth." He concludes that "although not consistently

effective as an initiation rite into Manhood, participation in an Outward Bound program can lead to a constructive development of self-confidence and to greater maturity for those who attend.

Self-confidence. Maturity.

Rhoades (1972) looks at the problem of individual change in Outward Bound, and applies ideas drawn from contemporary change and transfer theory. He applies the Lewin-Schein "three-step model" for change (un-freezing, change, freezing) to an Outward Bound course. He identifies the role of the instructor as crucial in the change stage, and points out that Outward Bound has little control over stage three (refreezing), as students have returned home at this point. He presents a number of strategies and accompanying rationale for increasing the likliehood that transfer will occur after the Outward Bound course is completed.

Change theory.

Transfer.

RECENT EVALUATION WORK ON OUTWARD BOUND:

Much of the above literature is "research" oriented, in the sense that little of it is specifically intended to give information to decision-makers within the Outward Bound organization to assist them in improving the quality of the program. In "The Measurment of Affective Education," Harmon (1974) summarizes work carried out by the Colorado and Texas Outward Bound Schools in evaluating their programs' effectiveness. The appraoch adopted here is to have programmers identify their goals within three traditional areas: Affective, Cognitive, and Psycho-motor Domains. Working mainly in the Affective Domain Harmon has encouraged Outward Bound to develope a series of goals ranging from general to specific. Using checklists based on these goals which are filled out by both instructors and students, he hopes to provide data to the organization indicating how well stated goals are being met. Some pilot testing of these materials has taken place but insufficient data has been gathered and analysed to indicate yet if this line of enquiry will provide useful information. However, Harmon's work in the development of goal statements and the use of checklists on Outward Bound programs has engendered an increased awareness in many staff of the educational potential of the program. Staff are talking about goals and making program changes on this basis.

Affective goals.

Checklists.

A somewhat different approach has been taken by Smith (1973) in a paper entitled 'Final Report: Project to Design an Evaluation of Outward Bound." Although the

term "evaluation" is used in the title, this is more of a "research" attempt using Rosen's distinction. Starting from a summary review of existing literature, Smith states that "to date .... no evaluation study of Outward Bound (related to the Colorado School) has been conducted to demonstrate unequivocally the results of Outward Bound. Her charge is to design such a study. She begins with an examination of Harmon's work on goal setting, interviews with Outward Bound staff, and reading of Outward Bound literature. From these sources four main variables are distilled out as commonly accepted outcomes of Outward Bound programs. These are: (1) self-esteem, (2) self-awareness, (3) self-assertion, (4) acceptance of others. A questionnaire has been developed to test these four factors and has been pilot tested on a Colorado Outward Bound School summer program. Her final study design consists of three seperate but interlinked approaches:

1. Study One: A small tightly controlled experimental design involving random assignment of 15 male and 15 female students to experimental and control groups. These students are observed during their field experience and respond to the questionnaire developed for the study. Follow-up data will be collected on these students after their return to high school at the end of the first and seconf semesters following their Outward Bound course. (Data will include grade-point average, extra-curricular activities, leadership activity, discipline, and adjustment ratings.)
2. Study Two: Employs a "Time-series design" in which every student (except teachers) who goes through the C.O.B.S. summer program responds to the questionnaire.
3. Study Three: Utilizes a "participant-observor" for descriptive evaluation aimed at elaborating on the subtleties and details of the program which will not receive attention in studies one and two.

CONCLUDING REMARKS: I emphasise again that many of the studies reviewed here do not meet rigorous criteria for validity. However, the overwhelming indication of these data is that Outward Bound methods are successfully changing the lives of people who participate in the program, in the direction of the stated goals of the program. More work is needed if traditional educators are to be convinced of these values. The work of Smith and Harmon seems most promising in this regard.

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